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KURILOV'S DEVICE FOR PREPARATION OF AN INDUSTRIAL FOAM

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DESCRIPTION OF INVENTION  
for Inventor's Certificate  
PATENT NO. SU 1743887 A1

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KURILOV'S DEVICE FOR PREPARATION OF AN INDUSTRIAL FOAM

[Ustroistvo dlya prigotovleniya tekhnicheskoi peny Kurilova]

Inventor:	V. V. Kurilov
Reference:	USSR Inventor's Certificate No. 1074731, Cl. B 28 C 5/38, 1982

The invention relates to devices for the preparation of industrial foam in the production of cellular (porized) construction solutions.

There is a known device for preparation of an industrial foam that consists of tubes for feed of the foam-forming solution and the dispersion agent that are connected together, a tube for formation of the foam, which has screens, and an additional tube with metallic elements in the form of turnings that are situated along the tube for formation of the foam.

There is a known device for preparation of an industrial foam that consists of tubes for feed of the foam forming agent and the dispersing agent, a mixing chamber and a screen, and a sleeve with vortexing elements situated along a helical multifilar line.

The shortcoming of the known device is the low quality of the foam.

The goal of the invention is an improvement of the quality of the foam by improving turbulization of the flow.

The nature of the invention is as follows.

A sleeve with vortexing elements on its inside surface is situated in the chamber for mixing and formation of the foam; the elements are formed as open droplet shapes with an increase or a decrease of their volume in the direction along the axis toward the screens.

Figure 1 shows the device, general view; Figure 2 shows the sleeve, cross section.

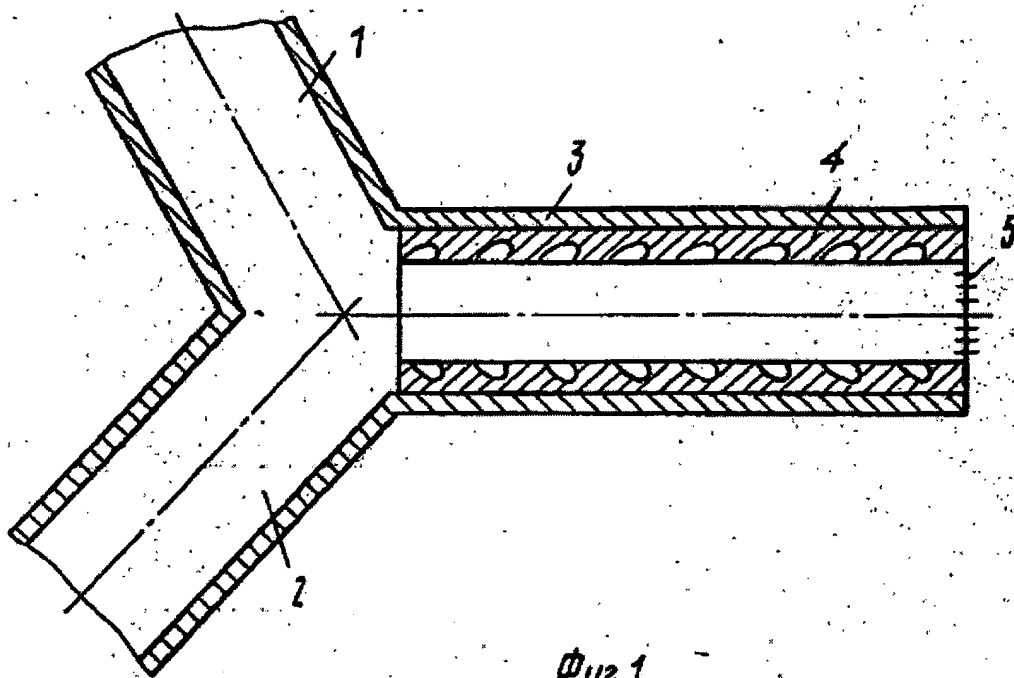
The device consists of tube 1 for feed of compressed air, tube 2 for feed of the foam-forming solution, chamber 3 for mixing and formation of the foam, sleeve 4 with vortexing elements formed as open droplet shapes, and screens 5.

The device operates in the following way:

The compressed air and foam-forming agent entering mixing chamber 3 through tubes 1 and 2 interact with the vortexing elements of sleeve 4 and becomes intensively mixed because of the vortexing streams, thereby creating a turbulent flow. The partially dispersed mixture in the form of a foam passes through screens 5. Then the completely dispersed mixture passes through a foam conduit (not shown) to the point of the placement of the cellular solution. By changing the volume of the droplet shaped elements, it is possible to regulate the degree of dispersion of the foam.

### Claim

A device for preparation of an industrial foam that consists of a body with tubes for feed of foam-forming solution and compressed air or water, and a sleeve with vortexing elements in the form of recesses on the working surface that are situated along a helical line that is inserted into the body, and screens, which is distinguished by the fact that, with the goal of improving the quality of the foam by increasing the turbulization of the flow, the vortexing elements are formed as open droplet shaped elements with an increase or a decrease of their volume in the direction toward the screens.



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Figure 1

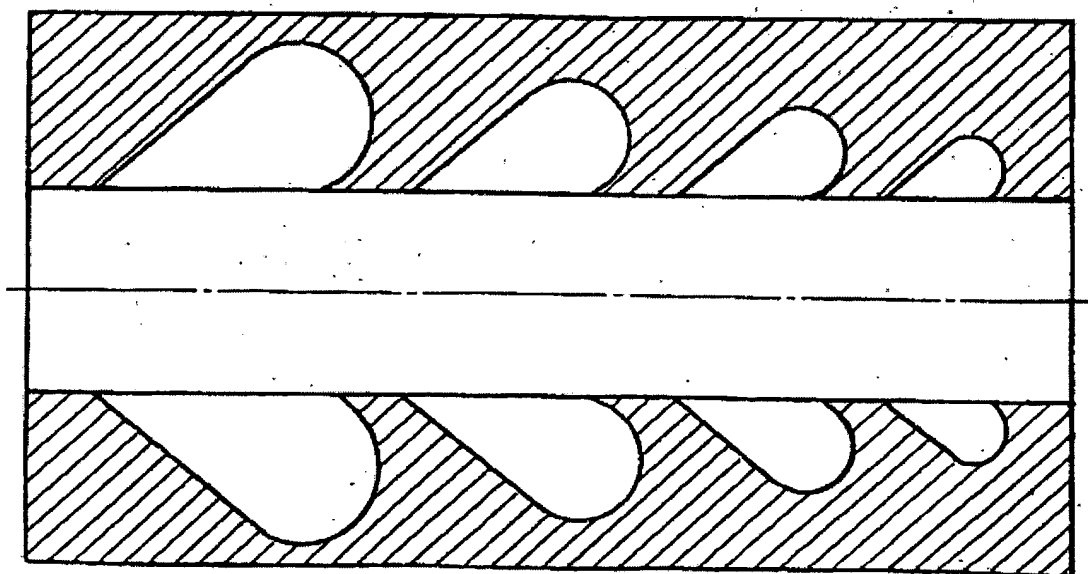


Figure 2